This listing of claims will replace all prior versions of claims in the present application:

Listing of Claims:

1. (previously presented) A method for forming a silica-containing boule comprising the steps of:

(a) providing a substantially planar surface;

(b) providing a soot-producing burner having a burner face that comprises first, second, third, fourth, fifth and sixth gas-emitting regions, the second region surrounding the first region, the third region surrounding the second region, the fourth region surrounding the third region, the fifth region surrounding the fourth region, and the sixth region surrounding the fifth region;

(c) providing a mixture comprising an inert gas and a halide-free, silicon-containing material to the first region;

(d) providing oxygen to the second region;

(e) providing a mixture of a combustible gas and oxygen to the third region;

(f) providing a mixture of a combustible gas and oxygen to the fourth region;

(g) providing a mixture of a combustible gas and oxygen to the fifth region;

(h) providing oxygen to the sixth region; and

(i) collecting silica-containing soot on the substantially planar surface to form the boule.

2. (previously presented) The method of Claim 1 wherein the burner produces a stream of soot particles and the width of the stream of soot particles is controlled to enhance the efficiency of step (i).

3. (previously presented) The method of Claim 2 wherein the width of the stream of soot particles is reduced to enhance the efficiency of step (i).

4. (previously presented) The method of Claim 2 wherein the width of the stream of soot particles is controlled by controlling the amount of oxygen provided to the sixth region.

5. (previously presented) The method of Claim 1 wherein the mixture of a combustible gas and oxygen is provided to the third region through a baffle.

6. (previously presented) The method of Claim 5 wherein the mixture of a combustible gas and oxygen is provided to the fourth and fifth regions through a baffle.

7. (previously presented) The method of Claim 1 wherein the third, fourth, fifth and sixth regions are radially spaced from one another by substantially the same distance.

8. (previously presented) The method of Claim 1 wherein the boule has a thickness greater than six inches.

9. (previously presented) The method of Claim 1 wherein the silica-containing soot is consolidated as it is being collected in step (i).

10. (previously presented) A method for forming a silica-containing boule comprising:

(a) providing a furnace which comprises:

(i) a cavity;

(ii) at least one burner which produces a stream of soot particles; and

(iii) a substantially planar surface within the cavity for collecting the soot particles to form the boule;

(b) providing a halide-free, silicon-containing material to the at least one burner; and

(c) collecting the soot particles produced by the at least one burner to form the boule;

wherein the width of the stream of soot particles is controlled to enhance the efficiency of step (c).

11. (previously presented) The method of Claim 10 wherein the width of the stream of soot particles is reduced to enhance the efficiency of step (c).

12. (previously presented) The method of Claim 10 wherein the at least one burner has a burner face and the width of the stream of soot particles is less than 25 millimeters at a distance of 150 millimeters from said face.

13. (previously presented) The method of Claim 12 wherein the width of the stream of soot particles is less than 12 millimeters at a distance of 150 millimeters from said face.

14. (previously presented) The method of Claim 10 wherein the at least one burner has a burner face and the width of the stream of soot particles is less than 25 millimeters at a distance of 200 millimeters from said face.

15. (previously presented) The method of Claim 14 wherein the width of the stream of soot particles is less than 12 millimeters at a distance of 200 millimeters from said face.

16. (previously presented) The method of claim 10 wherein the boule has a thickness greater than six inches.

17. (previously presented) The method of claim 10 wherein the soot particles are consolidated as they are collected in step (c).

18. (currently amended) A soot-producing burner comprising a burner face which comprises first, second, third, fourth, fifth and sixth gas-emitting regions, the second region surrounding the first region, the third region surrounding the second region, the fourth region surrounding the third region, the fifth region surrounding the fourth region, and the sixth region surrounding the fifth region, wherein:

(a) the first region ~~emits~~ is coupled to a source of a mixture of a halide-free, silicon-containing material and an inert gas;

(b) the second region ~~emits~~ is coupled to a source of oxygen;

(c) the third region ~~emits~~ is coupled to a source of a mixture of a combustible gas and oxygen;

(d) the fourth region ~~emits~~ is coupled to a source of a mixture of a combustible gas and oxygen;

(e) the fifth region ~~emits~~ is coupled to a source of a mixture of a combustible gas and oxygen; and

(f) the sixth region ~~emits~~ is coupled to a source of oxygen.

19. (previously presented) The burner of Claim 18 wherein the third, fourth, fifth and sixth regions are radially spaced from one another by substantially the same distance.

20. (previously presented) The burner of Claim 18 wherein the burner comprises a baffle and the mixture of a combustible gas and oxygen emitted by the third region passes through the baffle before being emitted from the face of the burner.

21. (previously presented) The burner of Claim 20 wherein the mixture of a combustible gas and oxygen emitted by the fourth and fifth regions passes through the baffle before being emitted from the face of the burner.

22. (currently amended) An apparatus ~~Apparatus~~ for producing silica-containing soot comprising:

(a) a source of a mixture of combustible gas and oxygen;

(b) a burner for producing silica-containing soot; and

(c) a source-to-burner conduit for carrying the mixture of a combustible gas and oxygen from the source to the burner;

wherein the burner comprises:

(i) a burner face which comprises three concentric gas-emitting regions, each of which emits the mixture of combustible gas and oxygen;

(ii) three gas-carrying conduits, one conduit connected to each of said three gas-emitting regions; and

(iii) a baffle between the source-to-burner conduit and the three gas-carrying conduits.